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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,364	01/15/2004	Shen-Hong Chou	87159200-242006	5309

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BAKER & MCKENZIE LLP
PATENT DEPARTMENT
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EXAMINER

LOVELL, LEAH S

ART UNIT	PAPER NUMBER
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2885

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/758,364	CHOU ET AL.	
	Examiner	Art Unit	
	Leah S. Lovell	2885	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>25 Apr 05 & 11 Aug 06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 11 August 2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the foreign references referred to therein has not been considered.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the novelty of the claims are directed.
3. The disclosure is objected to because of the following informalities: "light sources 20" should be replaced with "light sources 220" on line 5 of paragraph 20.

Appropriate correction is required.

Claim Objections

4. Claim 1 is objected to because of the following informalities: "and" should be inserted in at the end of line 2 of the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the

Art Unit: 2885

effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Pelka (US 6,007,209).

Regarding claim 1, Pelka discloses an illumination device for display systems comprising:

a plurality of light sources [12, 13];

at least one light diffusing plate [20] optically coupled to the plurality of light sources [figure 3] and having a light incidence area for receiving light from the plurality of light source [figure 3, surface closest to light sources (lower surface running horizontal)], wherein the plurality of light sources are distributed in a plane over an area 'S' that is at least approximately equal to or greater than the light incidence area of the at least one light-diffusing plate [figure 4 shows the array and the area 'S' in which the lights are disposed; figure 3 shows the size of the area in relation to the light incidence area of the light-diffusing plate].

In regard to claim 2, Pelka discloses:

the display system comprises a display panel [26] having a display area for displaying images;

the display panel [26] is optically coupled to the at least one light-diffusing plate [20] [figure 3]; and

light incidence area of the at least one light-diffusing plate corresponds to the display area [figure 3].

Regarding claim 3, Pelka discloses:

the display area has a width 'A' and a length 'B' [any three dimensional object has at least a width and length];

each one of the plurality of light sources is separated from adjacent light sources by a pitch 'G' [figure 4 shows spacing]; and

the area S is confined to the range defined by $(A+G) \times (B+G) \leq S \leq (A+3G) \times (B+3G)$ [while the dimensions are not explicitly stated from figure 3 it can be interpreted that the area 'S' is approximately $(A+2G) \times (B+2G)$ which meets the limitation].

Regarding claim 4, Pelka discloses the display panel [26] is a liquid crystal display panel [column 3, line 23].

In regard to claim 5, Pelka discloses the plurality of light sources [12, 13] are light emitting diodes [abstract; all throughout column 4].

In regard to claim 6, Pelka discloses the plurality of light sources [12, 13] are distributed in an array [figure 4; column 4, line 28-column 5, line 19].

Regarding claim 7, Pelka discloses a device case [14] enclosing the plurality of light sources [figure 3], wherein the device case comprises a plurality of sidewalls having an inner surface and an outer surface [figure 4].

In regard to claim 8, Pelka discloses a portion of at least one of the plurality of sidewalls is inclined at an angle in the range of about 60 degrees to about 90 degrees relative to the plane of the plurality of light sources [figure 3 shows the vertical side walls at a 90° angle to the horizontal bottom surface].

In regard to claim 9, Pelka discloses a portion of at least one of the plurality of sidewalls is curved [figure 3; the bottom portions of the vertical sidewalls are curved].

Regarding claim 10, Pelka discloses the inner surface of at least one of the plurality of sidewalls is configured to scatter light within the device case [column 3, line 60 since "diffusively" means to scatter light].

In regard to claim 11, Pelka discloses the inner surface of at least one of the plurality of sidewalls is configured to reflect light [column 3, lines 59-67].

7. Claims 12, 13, and 15-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Mosier (US 7,036,946).

Regarding claim 12, Mosier discloses an illumination device for a display system comprising:

a light guide plate [62] having at least one side edge surface [70] and a light-emerging surface [66], wherein the at least one side edge surface is substantially orthogonal to the light-emerging surface [figure 7]; and

a plurality of light sources [72] optically coupled to the light guide plate at the at least one side edge surface [figure 7], wherein the plurality of light sources is placed along a length 'M' that is at least equal to or greater than a length of the at least one side edge surface of the light guide plate [figure 7 ; inherently the light sources run the entire length of 'M' since no further means for reflecting light are necessary].

In regard to claim 13, Mosier discloses:

the display system comprises a display panel [not shown; column 4, line 67] having a display area for displaying images;

the display panel is optically coupled to the light guide plate [column 4, lines 65-67];

the display panel is substantially parallel to the light-emerging surface of the light guide plate [inherently the panel is parallel]; and

at least one side of the display area is substantially parallel to the at least one side edge surface of the light guide plate [the side of the display panel is inherently parallel to the side of the light guide plate].

Regarding claim 15, Mosier discloses the display panel is a liquid crystal display panel [abstract].

In regard to claim 16, Mosier discloses the plurality of light sources are light emitting diodes [abstract].

In regard to claim 17, Mosier discloses the plurality of light sources are distributed in an array [column 4, line 41]-.

Regarding claim 18, Mosier discloses a device case [64] enclosing the plurality of light sources, wherein the device case comprises a plurality of sidewalls having an inner surface and an outer surface.

In regard to claim 19, Mosier discloses a portion of at least one of the plurality of sidewalls is inclined at an angle in the range of about 60 degrees to about 90 degrees relative to the plane of the plurality of light sources [figure 7].

8. Claims 12-19, 21 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Satoh (US 6,315,440).

Regarding claim 12, Satoh discloses an illumination device for a display system comprising:

a light guide plate [20] having at least one side edge surface [vertical surface above reference numeral 22 on the light guide plate] and a light-emerging surface [upper horizontal surface of 20], wherein the at least one side edge surface is substantially orthogonal to the light-emerging surface [figures 3 and 5]; and

a plurality of light sources [23] optically coupled to the light guide plate at the at least one side edge surface [figures 3 and 5], wherein the plurality of light sources is placed along a length 'M' that is at least equal to or greater than a length of the at least one side edge surface of the light guide plate [column 5, lines 7-21].

In regard to claim 13, Satoh discloses:

the display system comprises a display panel [19] having a display area for displaying images;

the display panel is optically coupled to the light guide plate [figures 3 and 5];

the display panel is substantially parallel to the light-emerging surface of the light guide plate [figures 3 and 5]; and

at least one side of the display area is substantially parallel to the at least one side edge surface of the light guide plate [figures 3 and 5].

Regarding claim 14, Satoh discloses:

the at least one side of the display area that is substantially parallel to the at least one side edge surface of the light guide plate has a length 'B';

each one of the plurality of light sources is separated from the adjacent light sources by a pitch 'G'; and

the length 'M' is confined to the range defined by $(B+G) \leq M \leq (B+3G)$

[figure 2; column 5, lines 7-21].

Regarding claim 15, Satoh discloses the display panel is a liquid crystal display panel [column 5, line 47].

In regard to claim 16, Satoh discloses the plurality of light sources are light emitting diodes [column 5, lines 7-9].

In regard to claim 17, Satoh discloses the plurality of light sources are distributed in an array [column 5, lines 7-21].

Regarding claim 18, Satoh discloses a device case [22] enclosing the plurality of light sources [figures 3 and 5], wherein the device case comprises a plurality of sidewalls having an inner surface and an outer surface [figures 3 and 5].

In regard to claim 19, Satoh discloses a portion of at least one of the plurality of sidewalls is inclined at an angle in the range of about 60 degrees to about 90 degrees relative to the plane of the plurality of light sources [figures 3 and 5; the lower portion of the sidewall is at a 90 degree angle to the plane of the light sources].

Regarding claim 21, Satoh discloses the inner surface of at least one of the plurality of sidewalls is configured to scatter light within the device case [Satoh discloses that the inner wall is reflective; since there are multiple light beams exiting the light source in an at least 180° plane around one plane of the light source these light beams will all be hitting the reflecting surface 32 at different angles these light beams will then be scattered in a new direction; therefore, the reflective surface a scattering surface].

In regard to claim 22, Satoh discloses the inner surface of at least one of the plurality of sidewalls is configured to reflect light column 5, line 59].

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Satoh (US 6,315,440) as applied to claim 12 above, and further in view of Ahn et al. (US 2004/0070966).

In regard to claim 20, Satoh discloses a sloped surface on the sidewalls [figures 3 and 5]; however, Satoh does not disclose a portion of the sidewall being curved. One of ordinary skill in the art would have been led to the recited curved surface through routine experimentation and optimization. Applicant has not disclosed that the shape is for a particular unobvious purpose, produce an unexpected result, or are otherwise critical, and it appears prima facie that the process would possess utility using another shape. Indeed, it has been held that mere dimensional limitations are prima facie obvious absent a disclosure that the limitations are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical. See, for example, *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984); *In re Dailey*, 357 F.2d 669, 149 USPQ

47 (CCPA 1966). See also MPEP 2144.04(IV)(B). Ahn discloses a curved portion of the sidewall [64] to be curved. One would be motivated to swap the sloped portion of Satoh with a curved portion as disclosed by Ahn since it is known in the art that both surfaces, since at an angle to the light sources, both perform the task of redirecting light.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

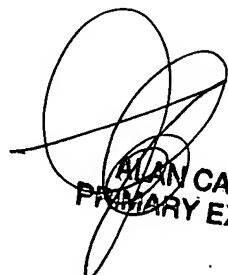
- Yang (US 2004/0151006)
- Kan (US 2004/0174706)
- Yu et al. (US 2005/0002205)
- Shaw et al. (US 6,419,372)
- Lim (US 6,923,548)
- Greiner (US 6,964,497)
- Lee et al. (US 6,969,189)
- Mosier (US 7,036,946)
- Harbers et al. (US 7,052,152)
- Griener (US 7,063,430)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leah S. Lovell whose telephone number is (571) 272-2719. The examiner can normally be reached on Monday through Friday 7:45 a.m. until 4:15 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jong-Suk (James) Lee can be reached on (571) 272-7044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Leah Lovell
Examiner
28 March 2007



ALAN CARIASO
PRIMARY EXAMINER